

Appendix A

Volume Control Test Data and Graph for Report No.: SUCR240600020104

The DUT shall have at least one volume control setting that will produce a conversational gain of ≥ 6 .

Verdict: Pass.

1.1 For codecs with bit rate, check the bit rate with the worst conversational gain

Codec	Codec Bitrate (kbps)	Conv. Gain(dB)							
		WCDMA B4		LTE B4		802.11 b		802.11 b	
		2N	8N	2N	2N	2N	8N	2N	8N
AMR-NB	4.75	7.14	12.01	7.27	7.27	NA	NA	7.27	11.60
	5.15	7.35	12.08	7.34	7.34	NA	NA	7.34	11.82
	5.90	7.42	12.38	7.45	7.45	NA	NA	7.45	11.86
	6.70	7.59	12.62	7.55	7.55	NA	NA	7.55	12.24
	7.40	7.65	12.74	7.70	7.70	NA	NA	7.70	12.18
	7.95	7.66	12.76	7.57	7.57	NA	NA	7.57	12.39
	10.20	7.69	12.80	7.64	7.64	NA	NA	7.64	12.52
	12.20	7.91	12.99	7.86	7.86	NA	NA	7.86	12.96
AMR-WB	6.60	8.41	13.48	7.84	7.84	NA	NA	7.84	12.59
	8.85	8.75	13.42	7.95	7.95	NA	NA	7.95	12.77
	12.65	8.76	13.72	8.02	8.02	NA	NA	8.02	12.83
	14.25	8.84	13.75	8.06	8.06	NA	NA	8.06	12.89
	15.85	8.90	13.80	8.17	8.17	NA	NA	8.17	12.95
	18.25	8.92	13.85	8.19	8.19	NA	NA	8.19	12.96
	19.85	8.91	13.87	8.31	8.31	NA	NA	8.31	12.88
	23.05	8.96	13.89	8.33	8.33	NA	NA	8.33	13.01
	23.85	8.96	13.92	8.41	8.41	NA	NA	8.41	13.05
EVS-NB	5.90	N/A		7.04	7.58	7.58	NA	7.58	12.48
	7.20			7.17	7.70	7.70	NA	7.70	12.53
	8.0			7.35	7.78	7.78	NA	7.78	12.55
	9.6			7.37	7.82	7.82	NA	7.82	12.56
	13.20			7.60	7.84	7.84	NA	7.84	12.59
	16.40			7.58	7.98	7.98	NA	7.98	12.59
	24.4			7.66	8.01	8.01	NA	8.01	12.60
EVS-WB	5.90			7.02	7.17	7.17	NA	7.17	12.85
	7.20			7.03	7.22	7.22	NA	7.22	12.86
	8.0			7.14	7.67	7.67	NA	7.67	12.95
	9.6			7.51	7.73	7.73	NA	7.73	12.98
	13.20			7.60	7.76	7.76	NA	7.76	12.97
	16.40			7.45	7.76	7.76	NA	7.76	12.91
	24.4			7.70	7.84	7.84	NA	7.84	13.14

1.2 For codecs with bit rate, tested only bit rate with the worst conversational gain

Air Interface	Band	Limit (dB)	Conv. Gain(dB)					
			FR V1		FR V2		HR V1	
			2N	8N	2N	8N	2N	8N
GSM	850	6	7.47	12.71	7.73	12.90	7.54	12.93
	1900	6	7.52	12.69	7.81	12.89	7.77	12.76

Air Interface	Band	Limit (dB)	Conv. Gain(dB)							
			AMR NB (4.7kbps)		AMR WB (6.6kbps)		EVS NB (5.9kbps)		EVS WB (5.9kbps)	
			2N	8N	2N	8N	2N	8N	2N	8N
WCDMA	B2	6	7.02	12.06	8.04	13.24	N/A			
	B4	6	7.13	12.10	8.15	13.32				
	B5	6	7.19	12.27	8.27	13.35				
LTE	B 2	6	7.06	12.16	7.81	13.39	7.20	12.21	7.18	12.09
	B 4	6	7.36	12.20	7.92	13.17	7.25	12.29	7.30	12.19
	B 5	6	7.14	12.02	8.85	13.35	7.34	12.27	6.88	11.81
	B 7	6	7.16	12.06	8.83	13.21	7.39	12.22	6.94	12.00
	B 12	6	7.07	12.24	8.02	13.29	7.10	12.25	6.93	11.89
	B 13	6	7.22	12.09	8.47	13.34	7.21	12.26	6.71	11.99
	B 14	6	7.36	12.14	8.38	13.28	7.09	12.16	6.61	11.93
	B 25	6	7.19	12.13	8.51	13.45	7.05	12.32	6.87	11.96
	B 26	6	7.31	12.05	8.21	13.49	7.08	12.20	6.97	11.85
	B 30	6	7.24	12.23	7.87	13.17	7.06	12.25	7.03	12.10
	B 38	6	7.11	12.14	7.81	13.09	7.25	12.16	6.93	11.89
	B 41	6	7.06	12.11	7.73	13.27	7.02	12.28	7.05	11.94
	B 42	6	6.93	12.10	7.81	13.20	7.03	12.26	7.03	11.86
	B 48	6	6.92	12.14	7.89	13.15	7.00	12.31	7.15	11.95
	B 66	6	7.16	12.14	7.88	13.31	6.93	12.39	7.14	11.84
	B 71	6	7.45	12.22	8.21	13.36	7.06	12.44	7.04	12.17
WLAN-2.4G	802.11b	6	6.95	12.018	7.93	12.92	7.06	11.96	7.03	11.87
	802.11g	6	6.91	12.02	7.94	12.84	7.20	11.72	7.06	11.75
	802.11n	6	7.08	12.00	7.95	12.83	7.08	11.99	7.12	11.70
	802.11ax	6	7.12	11.97	7.89	12.85	7.03	12.00	7.01	11.79
WLAN-5G	802.11a	6	7.77	12.52	7.81	12.76	7.02	12.05	6.90	11.26
	802.11n	6	7.81	12.50	8.05	12.79	7.08	12.11	6.60	11.28
	802.11ac	6	7.86	12.45	8.00	12.67	7.27	12.16	6.63	11.47
	802.11ax	6	7.82	12.55	8.08	12.82	7.21	12.12	6.80	11.38
WLAN-6E	802.11ax	6	7.61	12.70	8.11	12.78	7.47	12.37	6.81	11.51

Air Interface	Band	Limit (dB)	Conv. Gain(dB)		Conv. Gain(dB)	
			AMR NB (12.2kbps)		AMR WB (12.65kbps)	
			2N	8N	2N	8N
WCDMA	B2	6	7.32	12.44	8.34	13.49
	B4	6	7.47	12.56	8.44	13.58
	B5	6	7.66	12.75	8.75	13.68
LTE	B 2	6	7.74	12.75	8.28	13.60
	B 4	6	7.70	12.90	8.33	13.70
	B 5	6	7.68	12.88	8.42	13.67
	B 7	6	7.55	12.94	8.44	13.60
	B 12	6	7.66	12.89	8.51	13.72
	B 13	6	7.72	12.86	8.47	13.69
	B 14	6	7.77	12.78	8.75	13.71
	B 25	6	7.65	12.81	8.72	13.56
	B 26	6	7.60	12.88	8.65	13.49
	B 30	6	7.69	12.80	8.71	13.80
	B 38	6	7.66	12.86	8.69	13.63
	B 41	6	7.64	12.74	8.52	13.60
	B 42	6	7.67	12.90	8.42	13.56
	B 48	6	7.61	12.82	8.45	13.63
	B 66	6	7.71	12.87	8.63	13.65
WLAN-2.4G	802.11b	6	7.57	12.41	8.21	13.13
	802.11g	6	7.65	12.50	8.18	13.16
	802.11n	6	7.68	12.59	8.29	13.10
	802.11ax	6	7.70	12.70	8.32	13.18
WLAN-5G	802.11a	6	7.89	12.42	8.00	13.03
	802.11n	6	7.96	12.53	8.22	12.83
	802.11ac	6	7.91	12.30	8.34	12.98
	802.11ax	6	7.82	12.58	8.09	12.92
WLAN-6E	802.11ax	6	7.64	12.64	8.24	13.17

The noise power shall ≥ 20 when tested over the range of 1/3 octave band center frequencies.

Verdict: Pass

2.1 Distortion Test Result for EVS-NB 24.4 kbps and LTE

Center Freq	Limit	PN-SDNR(dB)									
		LTE Band 2		LTE Band 4		LTE Band 5		LTE Band 7		LTE Band 12	
		2N	8N	2N	8N	2N	8N	2N	8N	2N	8N
400	20	34.62	35.33	35.59	35.25	35.48	36.15	34.57	36.56	37.75	36.54
500		37.90	37.41	36.94	37.17	36.38	36.45	28.35	37.60	37.31	36.37
630		39.27	38.30	38.29	28.67	33.41	38.46	32.42	34.04	31.68	39.10
800		38.65	40.81	41.12	36.45	40.19	40.28	41.74	33.22	31.17	41.96
1000		39.32	42.41	42.21	40.33	39.02	43.41	30.72	43.10	33.24	44.25
1250		28.44	28.00	32.79	29.33	32.55	33.79	26.53	32.84	26.87	33.36
1600		37.90	37.99	44.01	35.37	41.61	42.55	34.47	39.57	38.50	34.89
2000		36.91	37.00	33.19	41.75	41.10	44.07	37.61	36.40	37.21	43.85
2500		37.23	34.56	42.56	38.98	39.45	38.07	39.23	38.94	39.16	36.15
3150		36.51	35.05	35.89	37.41	38.06	40.11	38.21	40.51	38.42	40.20

Center Freq	Limit	PN-SDNR(dB)									
		LTE Band 13		LTE Band 14		LTE Band 25		LTE Band 26		LTE Band 30	
		2N	8N	2N	8N	2N	8N	2N	8N	2N	8N
400	20	37.09	36.29	33.84	33.52	36.69	36.43	37.58	37.63	36.53	35.56
500		37.83	36.65	37.33	28.64	37.77	37.27	35.13	33.76	35.65	33.27
630		39.07	39.18	27.73	26.03	26.00	39.74	38.33	40.45	39.33	35.20
800		41.52	41.20	33.80	30.93	40.65	34.48	39.74	41.30	39.42	39.95
1000		43.36	40.05	28.21	29.27	40.49	40.68	41.80	44.48	38.64	42.32
1250		32.71	33.57	26.38	28.69	25.48	32.49	27.93	32.74	32.60	27.75
1600		43.31	33.17	34.46	32.27	37.79	42.47	38.09	43.12	38.50	37.62
2000		42.43	43.87	34.10	37.55	35.84	36.32	36.89	42.96	39.29	36.78
2500		42.65	34.53	39.06	38.08	37.44	39.06	38.24	40.35	36.81	37.03
3150		41.27	32.84	36.78	37.05	35.86	35.09	36.76	37.94	36.26	33.63

Center Freq	Limit	PN-SDNR(dB)									
		LTE Band 38		LTE Band 41		LTE Band 42		LTE Band 48		LTE Band 66	
		2N	8N	2N	8N	2N	8N	2N	8N	2N	8N
400	20	33.39	33.25	36.35	36.62	34.22	33.21	33.79	33.84	37.18	36.47
500		29.08	37.62	29.33	27.61	37.43	34.48	29.74	29.59	37.99	38.18
630		29.08	27.24	39.02	39.82	39.73	39.46	33.35	36.26	39.83	26.90
800		27.92	30.83	37.57	38.79	39.51	32.81	38.78	37.75	41.22	40.22
1000		39.98	41.99	39.33	38.52	39.27	39.62	39.69	41.59	41.13	42.27
1250		27.84	32.00	29.09	30.93	32.24	28.23	28.89	31.84	27.24	25.61
1600		30.04	31.97	37.34	40.23	41.11	33.32	36.54	41.07	43.54	29.68
2000		35.93	43.60	36.48	41.41	40.86	37.03	35.67	40.89	43.41	37.41
2500		35.34	38.14	36.72	37.90	39.08	35.35	36.09	37.81	42.54	38.57
3150		33.46	37.97	36.00	35.65	37.69	34.11	34.52	35.73	37.78	37.31

Center Freq	Limit	PN-SDNR(dB)	
		LTE Band 71	
		2N	8N
400	20	34.50	34.08
500		38.25	37.40
630		38.66	38.42
800		29.71	40.62
1000		26.61	27.05
1250		29.27	29.67
1600		29.74	40.15
2000		30.72	34.52
2500		36.82	36.87
3150		38.04	27.03

2.2 Distortion Test Result for EVS-NB 24.4 kbps and WLAN

Center Freq	Limit	PN-SDNR(dB)									
		2.4G - 802.11b		2.4G - 802.11g		2.4G - 802.11n		2.4G - 802.11ax		5G - 802.11a	
		2N	8N	2N	8N	2N	8N	2N	8N	2N	8N
400	20	36.68	35.55	36.20	34.73	36.86	34.75	34.99	25.30	30.91	36.60
500		36.88	34.07	36.90	27.75	36.28	36.31	28.78	28.52	29.09	34.87
630		29.30	34.34	25.87	34.45	28.62	39.45	28.99	25.58	28.49	31.52
800		34.65	31.71	26.24	28.62	38.22	38.67	28.78	30.40	33.86	33.90
1000		38.51	36.87	32.54	34.52	39.81	32.91	31.87	37.60	30.08	33.51
1250		30.58	28.69	27.27	25.93	27.90	32.74	25.40	31.44	21.00	23.75
1600		37.55	35.39	33.42	34.49	34.04	30.39	29.67	43.20	35.45	31.41
2000		36.57	32.86	31.83	32.49	38.02	41.53	30.79	31.02	28.84	31.13
2500		35.86	32.94	32.72	24.80	38.60	23.22	33.64	31.76	23.06	32.84
3150		31.87	31.43	31.99	29.34	36.55	32.63	32.14	30.36	29.55	32.03

Center Freq	Limit	PN-SDNR(dB)							
		5G - 802.11n		5G - 802.11ac		5G - 802.11ax		6E - 802.11ax	
		2N	8N	2N	8N	2N	8N	2N	8N
400	20	36.71	35.83	35.03	37.47	31.66	32.95	36.48	36.98
500		37.14	36.54	35.31	34.74	31.67	37.94	36.58	31.52
630		34.39	38.63	31.83	40.95	23.50	39.06	37.55	38.64
800		35.38	39.60	32.82	39.88	29.25	30.81	36.49	36.20
1000		37.75	40.49	33.93	44.12	27.79	31.56	38.60	37.58
1250		27.70	31.75	22.92	32.79	23.33	28.81	30.25	29.02
1600		33.13	38.34	33.71	39.73	33.96	35.20	36.41	33.59
2000		31.93	40.05	29.60	41.84	29.47	40.73	35.09	34.20
2500		33.92	22.14	33.80	33.32	36.02	23.18	36.36	37.43
3150		35.23	33.17	31.87	34.94	33.66	32.57	35.19	36.61

2.3 Distortion Test Result for EVB-WB 24.4 kbps and LTE

Center Freq	Limit	PN-SDNR(dB)									
		LTE Band 2		LTE Band 4		LTE Band 5		LTE Band 7		LTE Band 12	
		2N	8N	2N	8N	2N	8N	2N	8N	2N	8N
250	20	30.03	31.04	31.71	32.75	32.83	33.12	33.07	33.92	36.27	34.45
315		31.57	33.86	32.74	34.02	34.04	33.59	31.47	34.51	36.55	36.54
400		35.78	35.81	33.16	35.54	35.81	35.89	31.79	35.79	37.46	37.58
500		31.45	34.36	35.17	36.92	37.71	35.04	35.66	37.42	37.67	36.49
630		38.36	34.26	38.79	39.16	36.16	39.72	29.64	39.49	40.76	39.42
800		37.01	35.85	39.96	33.41	32.60	39.68	32.57	33.40	40.56	37.43
1000		31.30	41.22	43.53	31.49	28.53	29.30	32.62	37.41	43.40	37.09
1250		29.44	33.29	33.11	29.27	22.16	22.25	22.35	29.74	26.09	29.27
1600		22.15	40.03	41.42	36.39	36.82	26.12	33.25	37.34	27.47	30.72
2000		35.17	39.56	21.30	24.47	23.99	39.96	30.37	37.71	42.13	35.90
2500		35.56	37.05	33.43	32.16	30.62	39.10	31.66	38.73	41.28	38.07
3150		34.62	34.30	22.14	31.09	32.55	32.60	29.87	38.82	37.53	38.50
4000		27.61	26.13	24.29	25.32	37.67	38.56	25.76	39.01	27.32	38.13
5000		37.24	35.53	32.84	30.96	31.26	37.32	27.22	31.24	38.36	37.25

Center Freq	Limit	PN-SDNR(dB)									
		LTE Band 13		LTE Band 14		LTE Band 25		LTE Band 26		LTE Band 30	
		2N	8N	2N	8N	2N	8N	2N	8N	2N	8N
250	20	35.34	35.20	35.13	34.41	31.65	34.46	34.39	34.07	33.83	23.55
315		34.16	35.94	35.25	35.07	34.73	35.00	35.06	34.80	35.39	31.94
400		37.32	36.97	36.59	36.25	35.52	36.05	36.91	36.30	37.38	32.77
500		33.89	35.86	38.25	34.79	34.01	37.39	36.35	37.05	36.47	37.50
630		40.17	37.44	40.62	40.58	39.92	39.92	40.14	38.28	39.15	37.76
800		34.34	36.23	36.64	34.95	40.08	36.33	39.66	36.10	34.73	38.88
1000		30.57	41.97	31.84	30.48	39.54	36.56	43.48	36.60	35.46	41.02
1250		23.44	32.04	29.78	33.05	24.05	24.87	33.20	28.40	28.91	32.65
1600		27.30	26.41	38.11	40.44	37.52	30.32	39.42	34.23	36.68	38.66
2000		24.40	31.09	37.32	25.36	37.64	36.48	38.51	34.76	31.48	39.65
2500		30.52	32.51	35.91	38.28	35.44	34.32	37.87	35.56	34.28	38.27
3150		32.76	40.31	39.10	39.03	33.35	29.13	37.77	37.14	35.75	36.30
4000		40.21	26.33	25.85	37.60	37.89	31.28	38.79	35.46	34.47	36.41
5000		37.97	38.26	35.15	35.65	36.32	30.62	37.72	31.70	36.22	23.34

Center Freq	Limit	PN-SDNR(dB)									
		LTE Band 38		LTE Band 41		LTE Band 42		LTE Band 48		LTE Band 66	
		2N	8N	2N	8N	2N	8N	2N	8N	2N	8N
250	20	36.05	36.17	32.87	34.80	33.16	32.57	29.19	33.35	31.94	31.96
315		34.74	35.79	32.40	35.38	34.75	35.34	34.25	34.62	34.82	34.92
400		36.25	37.25	37.28	36.92	36.15	36.70	35.61	36.63	36.25	36.24
500		36.98	34.95	34.81	35.92	33.98	37.60	34.56	35.54	37.78	37.81
630		37.35	38.78	39.68	40.83	39.12	36.82	38.00	39.77	39.54	40.66
800		38.71	40.86	36.06	40.90	33.15	36.15	34.56	34.56	32.23	41.60
1000		32.86	36.30	31.97	31.42	31.96	40.33	32.13	36.14	36.52	42.82
1250		28.99	24.49	28.47	24.93	29.01	24.35	33.33	28.39	29.52	23.27
1600		37.49	31.72	36.30	41.28	33.26	39.95	31.65	37.66	24.30	23.42
2000		37.02	26.23	25.99	40.30	33.52	41.01	37.30	36.53	24.85	44.82
2500		38.56	41.73	36.65	35.01	33.94	38.33	39.00	36.15	32.33	41.50
3150		36.87	34.18	36.95	36.85	34.25	37.88	33.97	36.52	37.47	36.94
4000		38.42	26.74	32.07	38.48	36.12	38.17	36.03	35.36	26.03	40.29
5000		29.12	30.41	36.32	37.80	33.97	34.09	36.97	36.49	36.68	35.81

Center Freq	Limit	PN-SDNR(dB)	
		LTE Band 71	
		2N	8N
250	20	34.59	32.21
315		35.32	34.65
400		37.23	35.28
500		34.84	37.74
630		40.25	39.96
800		40.61	34.99
1000		34.01	31.85
1250		23.95	23.12
1600		41.99	22.78
2000		41.67	23.63
2500		32.77	33.22
3150		40.75	33.07
4000		33.33	36.75
5000		37.78	37.32

2.4 Distortion Test Result for EVB-WB 24.4 kbps and WLAN

Center Freq	Limit	PN-SDNR(dB)									
		2.4G - 802.11b		2.4G - 802.11g		2.4G - 802.11n		2.4G - 802.11ax		5G - 802.11a	
		2N	8N	2N	8N	2N	8N	2N	8N	2N	8N
250	20	29.20	30.62	31.92	32.45	29.88	34.06	30.76	31.49	31.31	29.83
315		33.48	33.44	33.66	34.26	32.70	35.29	33.26	27.92	20.21	34.36
400		36.62	35.56	37.01	34.00	33.56	34.84	34.54	30.26	34.57	35.59
500		36.00	30.15	36.08	37.14	33.75	34.23	32.64	34.30	31.64	36.18
630		38.37	31.02	36.05	36.63	33.28	32.41	32.99	32.98	31.98	39.71
800		38.53	29.28	34.98	37.47	30.57	32.86	30.49	32.78	34.22	40.43
1000		37.31	29.80	35.05	29.18	31.46	32.16	31.46	32.02	27.44	39.47
1250		29.07	23.65	23.96	28.95	25.30	28.31	27.27	22.45	22.84	32.10
1600		35.26	31.91	36.52	38.66	24.80	33.54	31.42	26.62	28.98	38.23
2000		34.55	30.69	25.75	36.92	31.70	35.61	30.11	23.42	28.17	38.23
2500		35.03	23.01	30.26	30.30	33.79	30.71	29.34	30.12	30.01	36.46
3150		27.39	32.57	29.75	34.90	34.40	35.71	29.65	33.38	31.34	35.54
4000		31.61	31.33	24.20	25.85	35.79	37.54	32.78	27.93	32.62	37.03
5000		30.26	32.62	35.76	31.47	30.61	34.68	33.31	26.85	32.92	32.72

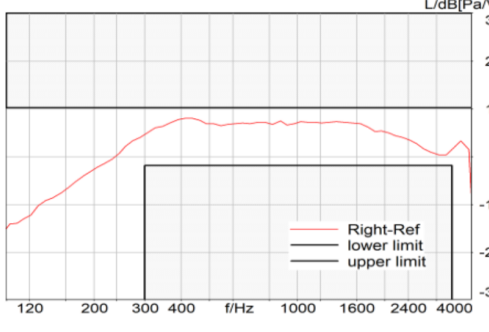
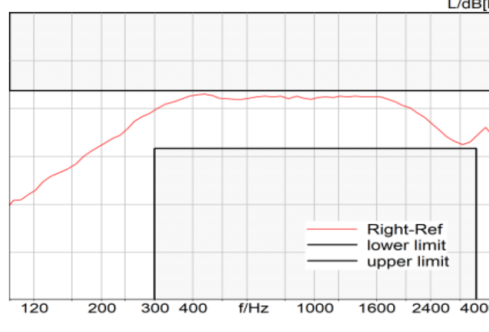
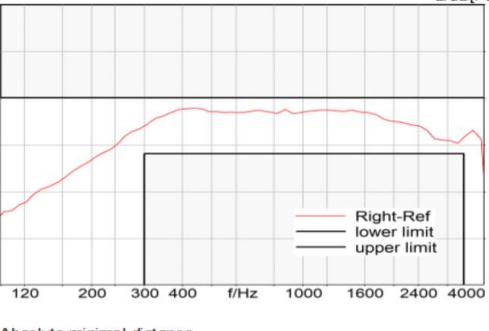
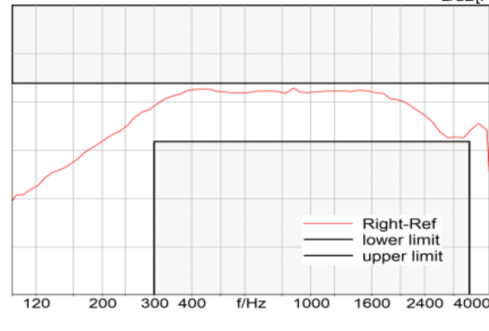
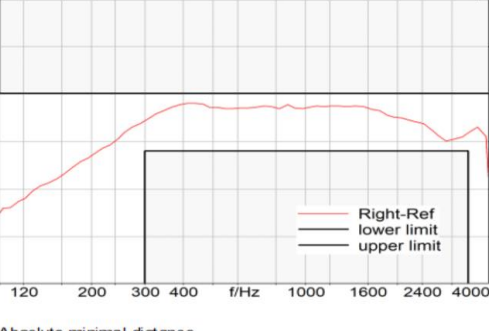
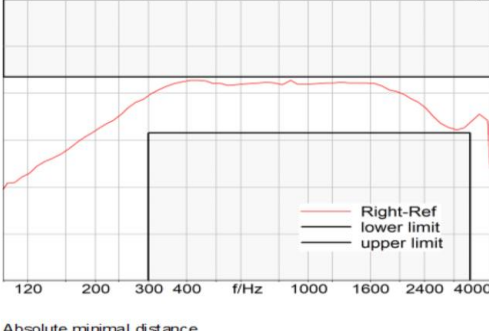
Center Freq	Limit	PN-SDNR(dB)							
		5G - 802.11n		5G - 802.11ac		5G - 802.11ax		6E - 802.11ax	
		2N	8N	2N	8N	2N	8N	2N	8N
250	20	30.45	32.37	33.23	34.19	25.21	33.70	24.36	25.22
315		33.19	34.01	35.01	32.23	33.28	35.33	31.38	31.17
400		34.42	32.07	35.74	36.59	34.83	36.45	34.43	23.09
500		32.51	30.31	31.61	37.08	31.86	37.45	32.00	29.80
630		37.14	34.98	31.33	39.16	33.19	39.91	35.81	24.36
800		32.83	30.42	31.64	39.47	28.23	39.35	36.64	24.10
1000		31.78	29.82	28.10	41.28	30.25	41.91	31.90	20.24
1250		23.40	24.06	23.94	25.66	22.72	33.28	28.66	20.62
1600		34.25	30.73	31.03	26.01	25.86	39.02	33.32	25.98
2000		23.13	33.18	30.22	37.69	26.85	38.88	32.19	23.85
2500		30.31	27.40	31.96	37.06	30.56	37.19	32.82	24.43
3150		29.83	32.16	33.47	36.06	28.70	34.94	30.46	26.89
4000		35.63	32.07	33.13	37.15	30.26	37.30	33.88	23.53
5000		28.00	33.33	33.07	30.26	30.19	36.28	33.82	28.07

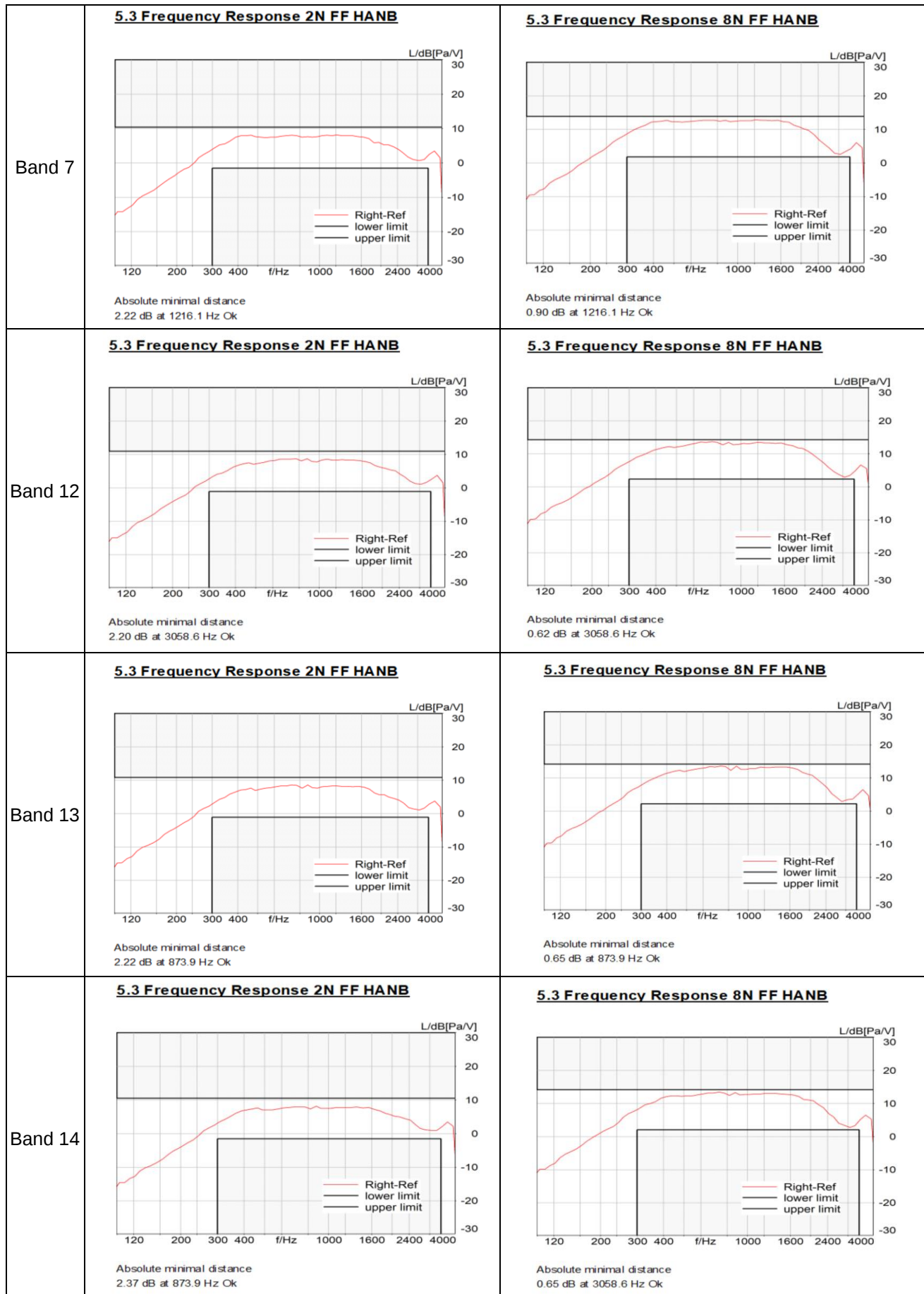
The receive frequency response shall be measured at the DRP in 1/12 octave bands. After translation to the FF, it shall fall between the applicable upper and lower limits.

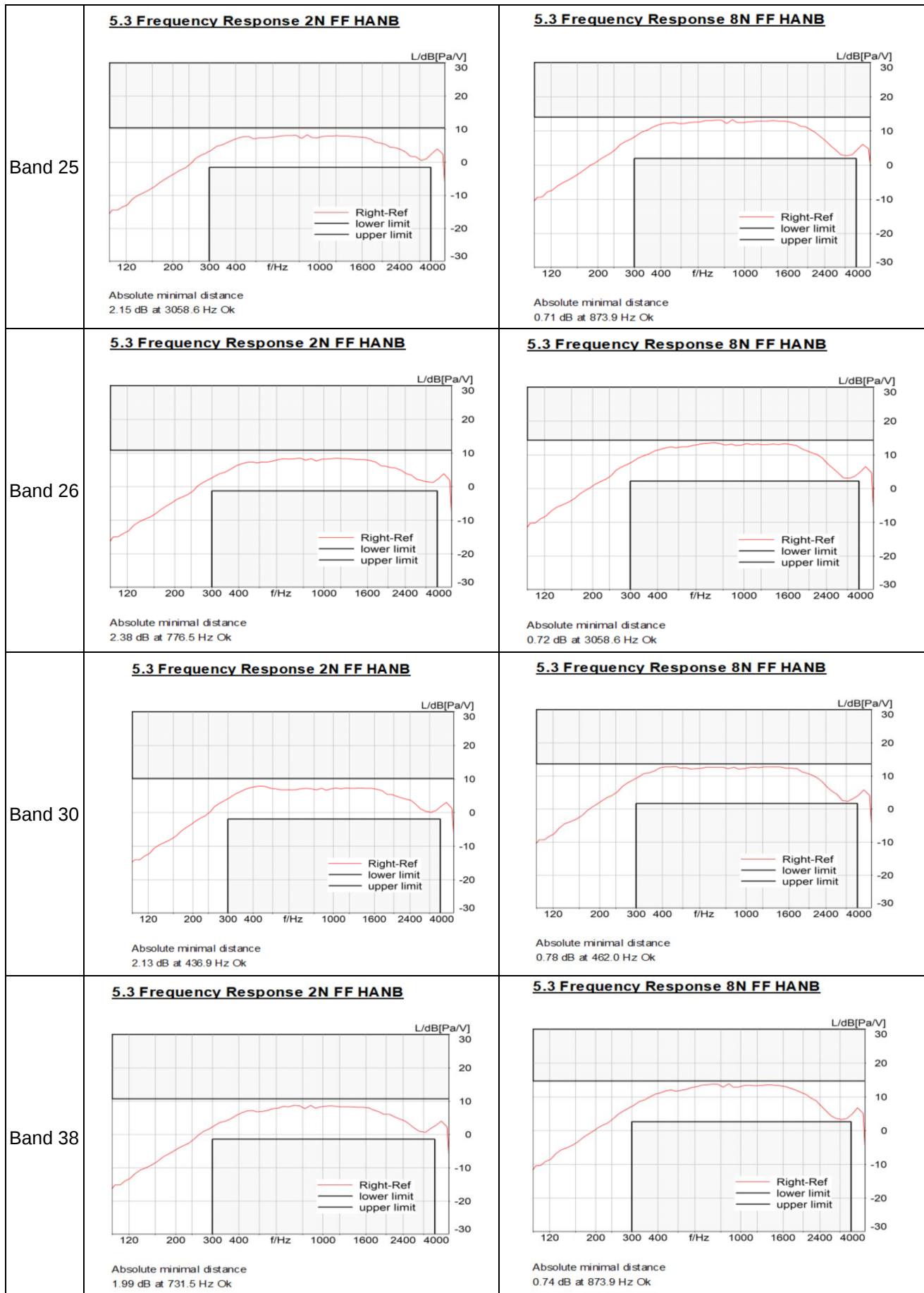
Volume Control: Max, LRP: FF

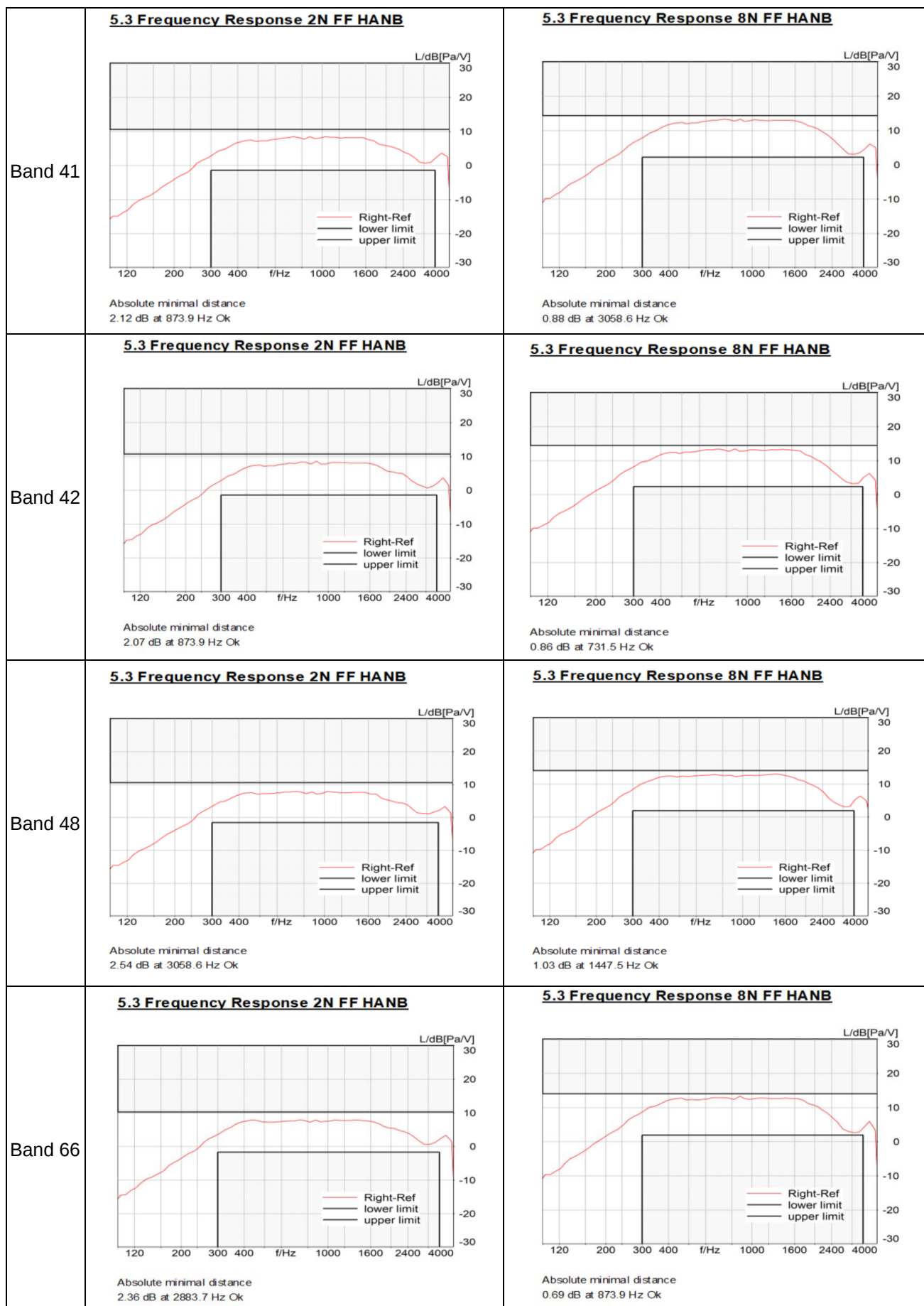
Verdict: Pass

3.1 Frequency Response Graph for EVS-NB 24.4 kbps and LTE

LTE Band	Frequency Response	
	N2	N8
Band 2	5.3 Frequency Response 2N FF HANB  Absolute minimal distance 2.16 dB at 436.9 Hz Ok	5.3 Frequency Response 8N FF HANB  Absolute minimal distance 0.71 dB at 436.9 Hz Ok
Band 4	5.3 Frequency Response 2N FF HANB  Absolute minimal distance 2.25 dB at 436.9 Hz Ok	5.3 Frequency Response 8N FF HANB  Absolute minimal distance 0.88 dB at 873.9 Hz Ok
Band 5	5.3 Frequency Response 2N FF HANB  Absolute minimal distance 2.06 dB at 436.9 Hz Ok	5.3 Frequency Response 8N FF HANB  Absolute minimal distance 0.72 dB at 873.9 Hz Ok

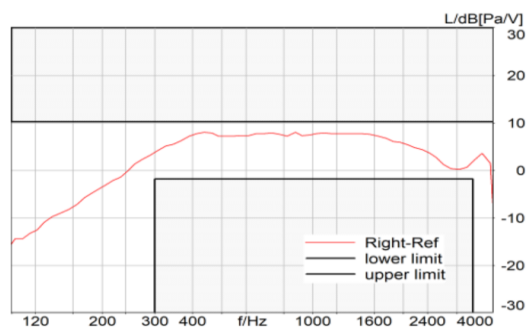






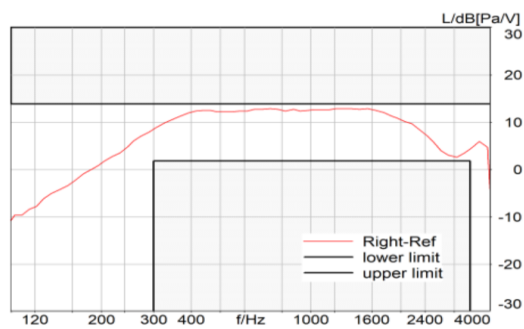
Band 71

5.3 Frequency Response 2N FF HANB



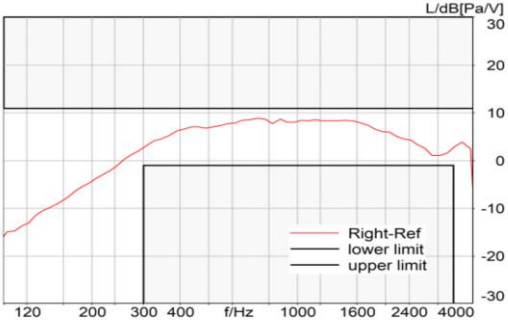
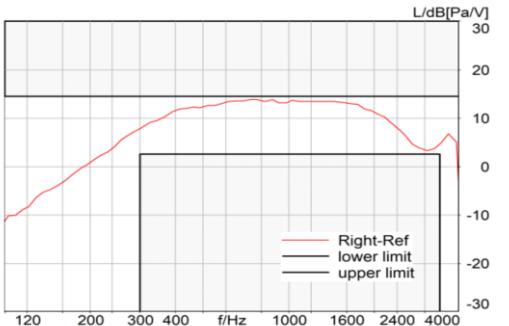
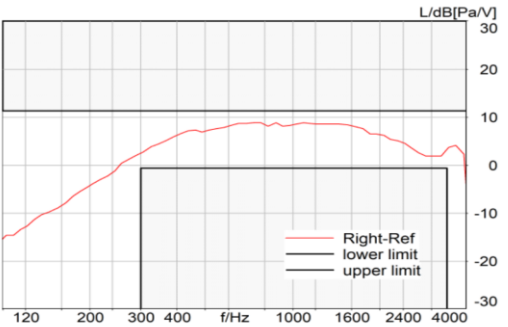
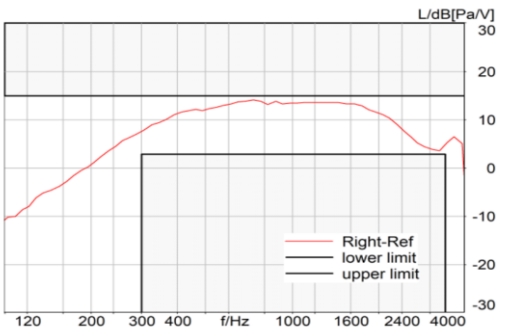
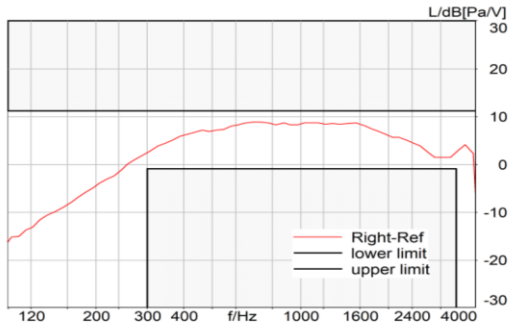
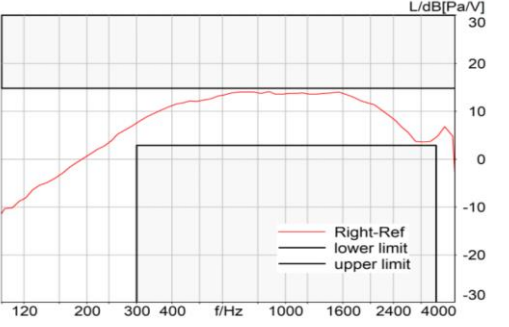
Absolute minimal distance
2.11 dB at 873.9 Hz Ok

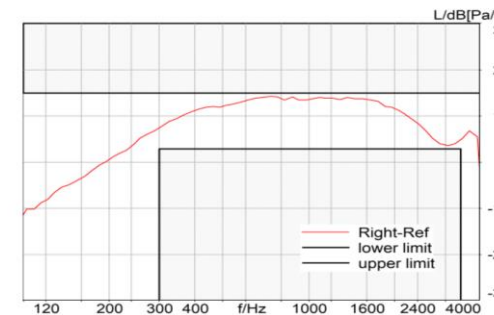
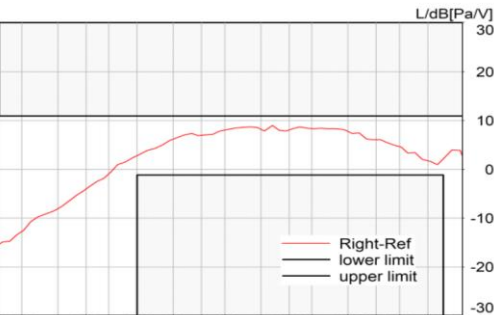
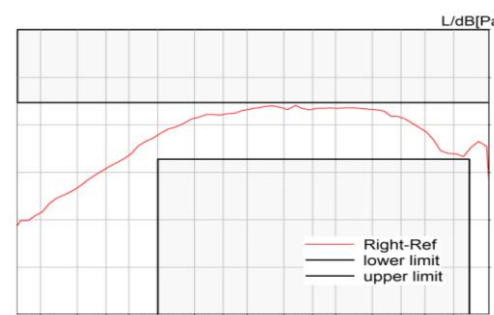
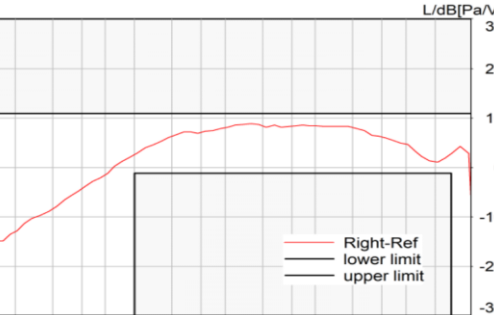
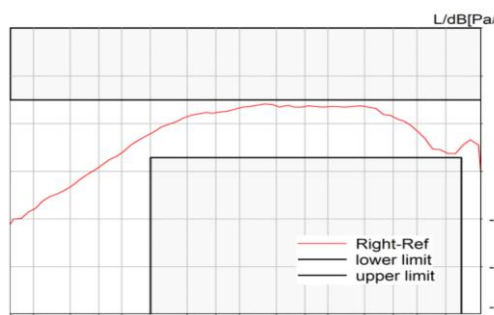
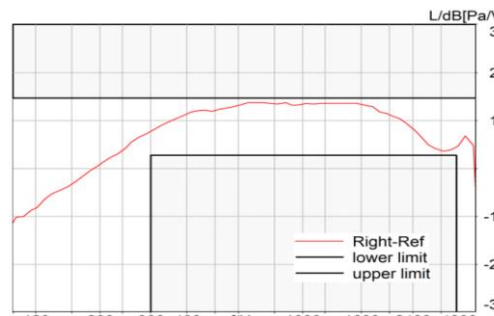
5.3 Frequency Response 8N FF HANB

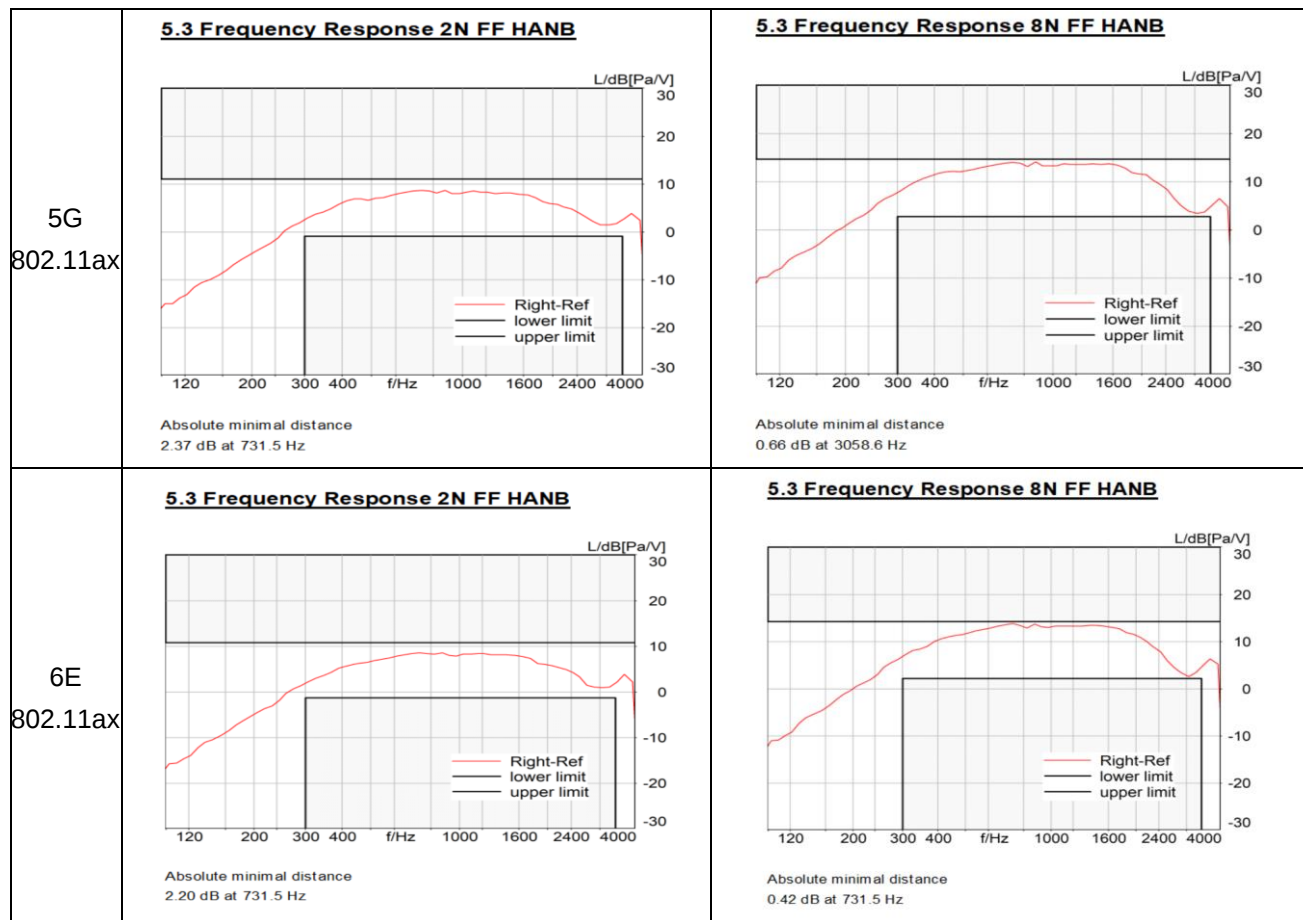


Absolute minimal distance
0.86 dB at 731.5 Hz Ok

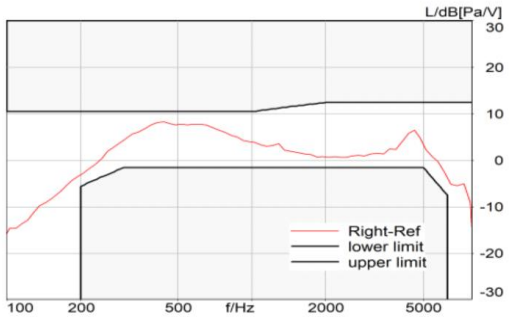
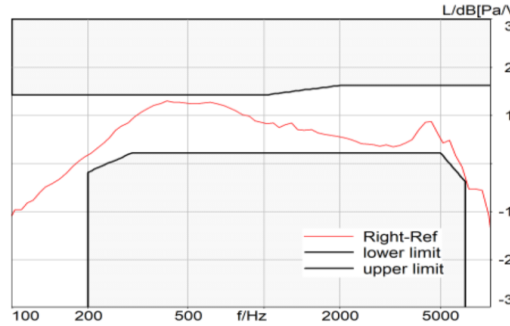
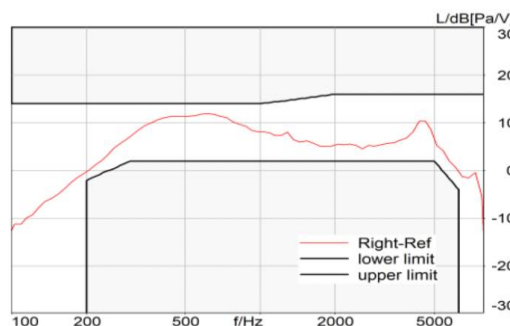
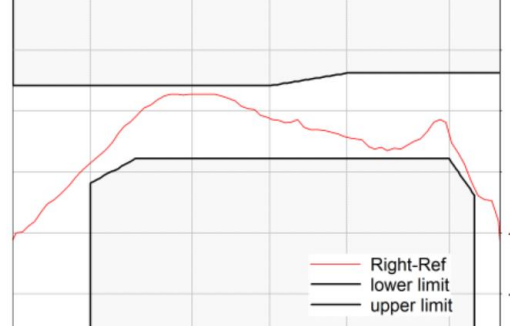
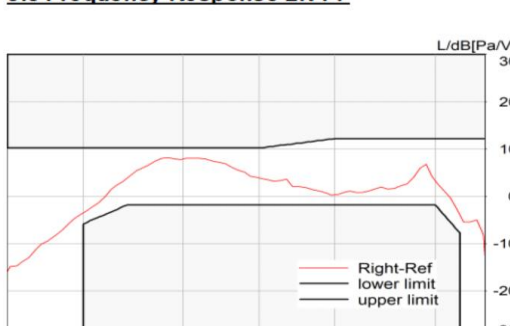
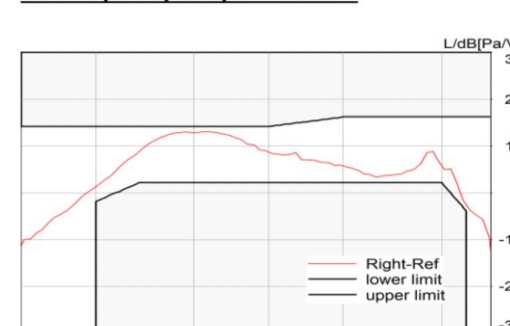
3.2 Frequency Response Graph for EVS-NB 24.4 kbps and WLAN

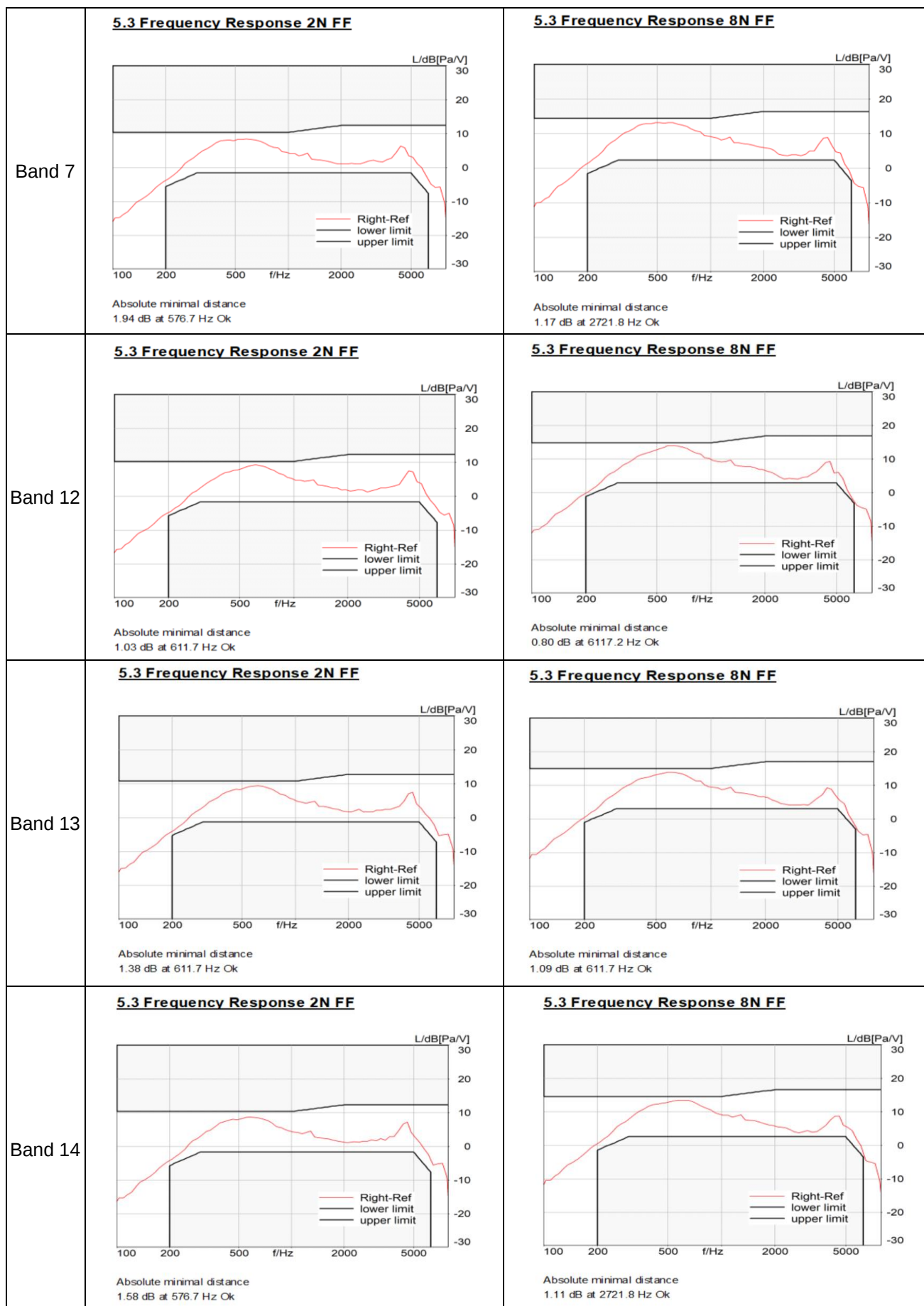
WLAN Band	Frequency Response	
	N2	N8
2.4G 802.11b	5.3 Frequency Response 2N FF HANB  Absolute minimal distance 2.07 dB at 731.5 Hz	5.3 Frequency Response 8N FF HANB  Absolute minimal distance 0.76 dB at 776.5 Hz
2.4G 802.11g	5.3 Frequency Response 2N FF HANB  Absolute minimal distance 2.50 dB at 776.5 Hz	5.3 Frequency Response 8N FF HANB  Absolute minimal distance 0.75 dB at 731.5 Hz
2.4G 802.11n	5.3 Frequency Response 2N FF HANB  Absolute minimal distance 2.27 dB at 731.5 Hz	5.3 Frequency Response 8N FF HANB  Absolute minimal distance 0.79 dB at 873.9 Hz

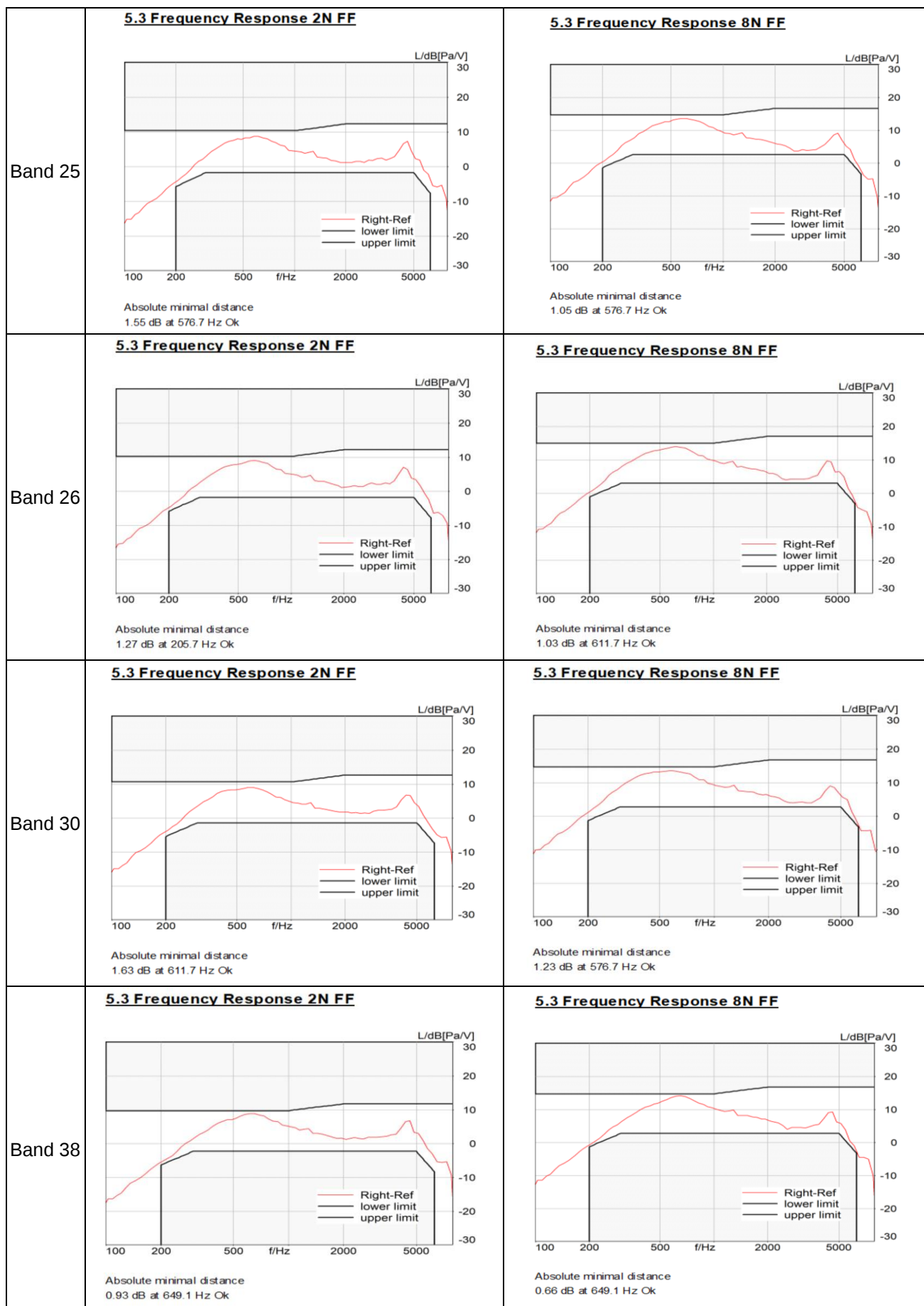
2.4G 802.11ax	5.3 Frequency Response 2N FF HANB  Absolute minimal distance 2.02 dB at 731.5 Hz	5.3 Frequency Response 8N FF HANB  Absolute minimal distance 0.70 dB at 731.5 Hz
5G 802.11a	5.3 Frequency Response 2N FF HANB  Absolute minimal distance 1.97 dB at 3245.6 Hz	5.3 Frequency Response 8N FF HANB  Absolute minimal distance 0.61 dB at 873.9 Hz
5G 802.11n	5.3 Frequency Response 2N FF HANB  Absolute minimal distance 2.12 dB at 3058.6 Hz	5.3 Frequency Response 8N FF HANB  Absolute minimal distance 0.84 dB at 3058.6 Hz
5G 802.11ac	5.3 Frequency Response 2N FF HANB  Absolute minimal distance 2.36 dB at 689.1 Hz	5.3 Frequency Response 8N FF HANB  Absolute minimal distance 0.94 dB at 689.1 Hz

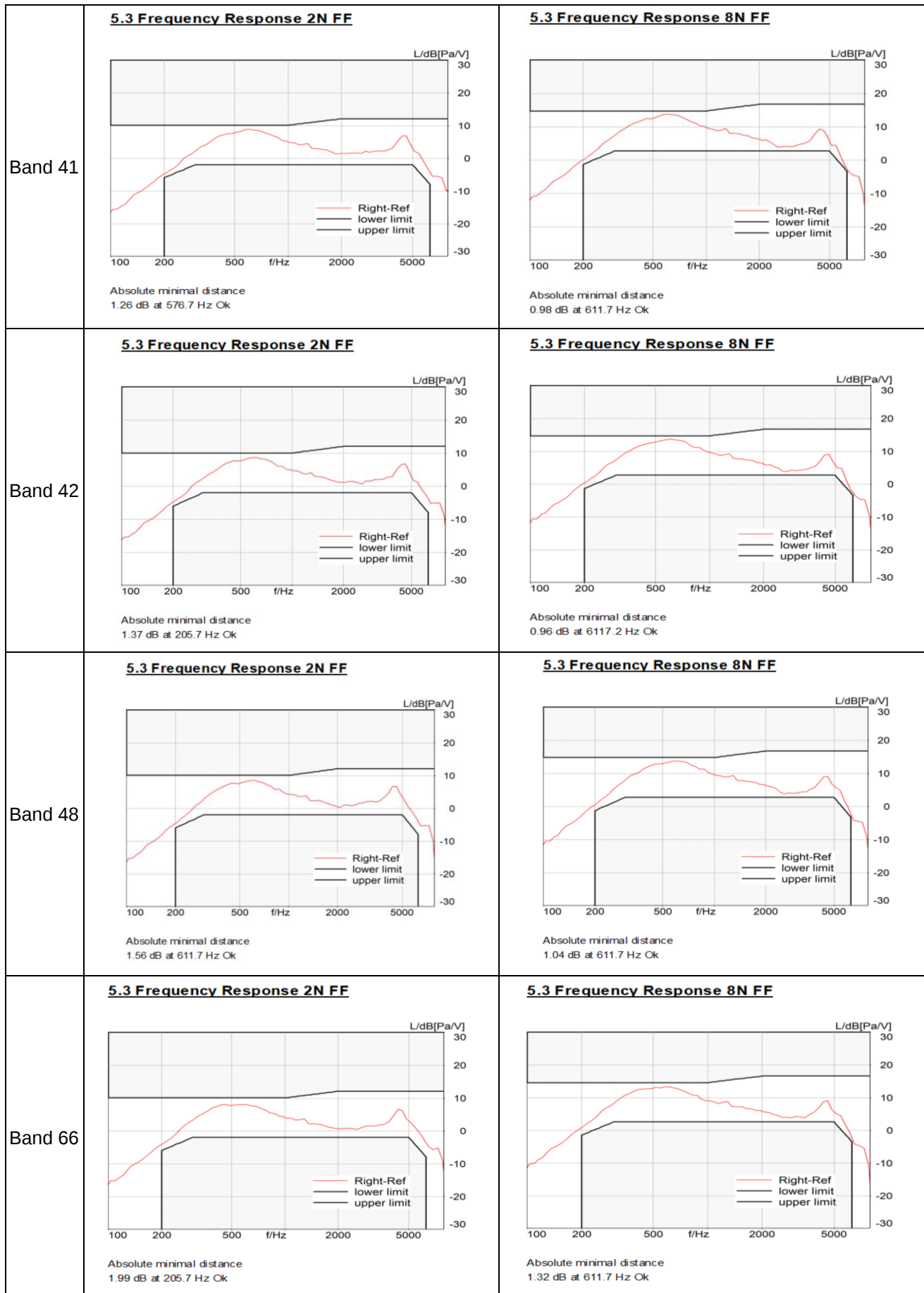


3.3 Frequency Response Graph for EVS-WB 24.4 kbps and LTE

LTE Band	Frequency Response	
	N2	N8
Band 2	5.3 Frequency Response 2N FF  Absolute minimal distance 2.16 dB at 436.9 Hz Ok	5.3 Frequency Response 8N FF  Absolute minimal distance 1.26 dB at 412.0 Hz Ok
	5.3 Frequency Response 2N FF  Absolute minimal distance 2.00 dB at 611.7 Hz Ok	5.3 Frequency Response 8N FF  Absolute minimal distance 1.37 dB at 2883.7 Hz Ok
Band 4	5.3 Frequency Response 2N FF  Absolute minimal distance 2.05 dB at 436.9 Hz Ok	5.3 Frequency Response 8N FF  Absolute minimal distance 1.11 dB at 576.7 Hz Ok
	5.3 Frequency Response 2N FF  Absolute minimal distance 2.05 dB at 436.9 Hz Ok	5.3 Frequency Response 8N FF  Absolute minimal distance 1.11 dB at 576.7 Hz Ok
Band 5	5.3 Frequency Response 2N FF Absolute minimal distance 2.05 dB at 436.9 Hz Ok	5.3 Frequency Response 8N FF Absolute minimal distance 1.11 dB at 576.7 Hz Ok
	5.3 Frequency Response 2N FF Absolute minimal distance 2.05 dB at 436.9 Hz Ok	5.3 Frequency Response 8N FF Absolute minimal distance 1.11 dB at 576.7 Hz Ok

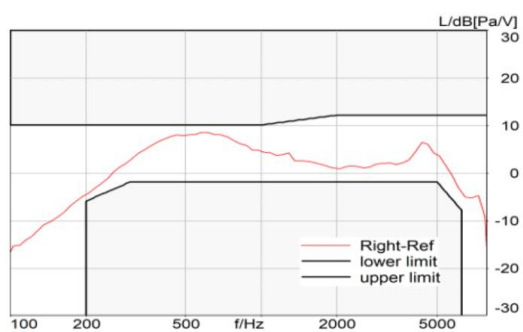






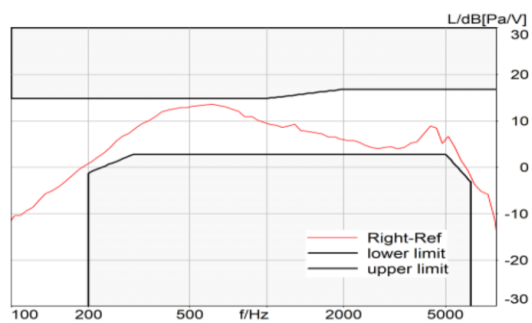
Band 71

5.3 Frequency Response 2N FF



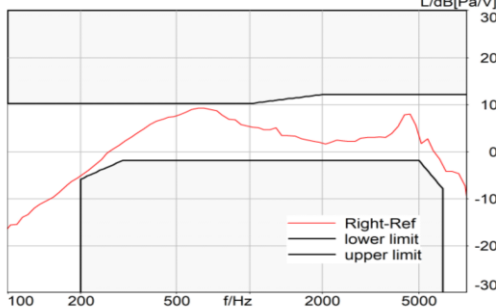
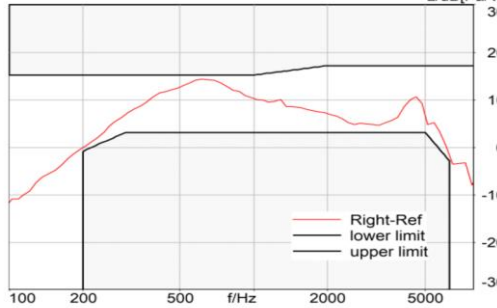
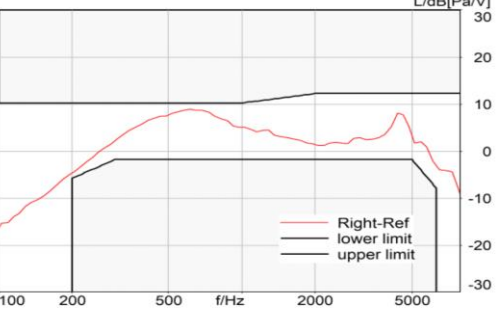
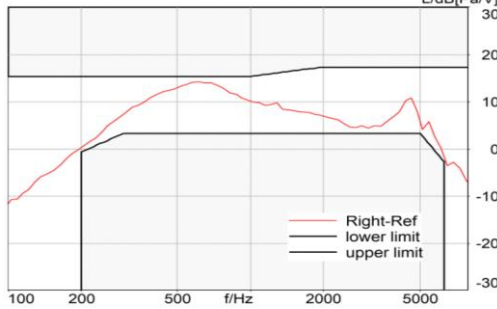
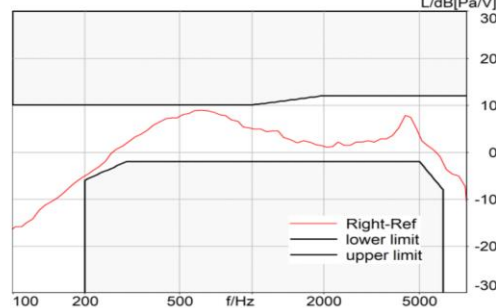
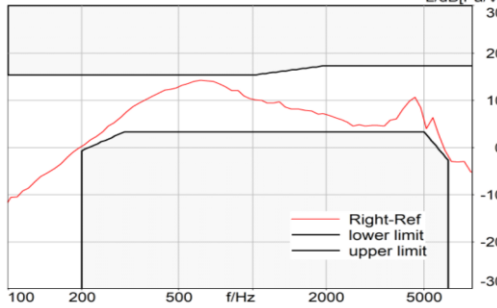
Absolute minimal distance
1.59 dB at 576.7 Hz Ok

5.3 Frequency Response 8N FF



Absolute minimal distance
1.26 dB at 611.7 Hz Ok

3.4 Frequency Response Graph for EVS-WB 24.4 kbps and WLAN

WLAN Band	Frequency Response	
	N2	N8
2.4G 802.11b	5.3 Frequency Response 2N FF  Absolute minimal distance 0.88 dB at 649.1 Hz	5.3 Frequency Response 8N FF  Absolute minimal distance 0.84 dB at 611.7 Hz
2.4G 802.11g	5.3 Frequency Response 2N FF  Absolute minimal distance 1.27 dB at 205.7 Hz	5.3 Frequency Response 8N FF  Absolute minimal distance 1.10 dB at 611.7 Hz
2.4G 802.11n	5.3 Frequency Response 2N FF  Absolute minimal distance 1.04 dB at 205.7 Hz	5.3 Frequency Response 8N FF  Absolute minimal distance 1.10 dB at 611.7 Hz

